

## APPENDIX C

### **CONSTRUCTION SUBPLAN**

**1. Purpose.** This Appendix provides the procedures for execution of the Quality Assurance (QA) operating plan to be utilized in the execution of construction contracts within the Huntington District.

**2. Applicability.** This appendix applies to all elements and personnel within the Huntington District that are responsible for Quality Assurance of construction contracts.

**3. References.**

- a. ER 415-1-10, Contract Submittal Procedures
- b. ER 415-1-11, Biddability, Constructibility And Operability
- c. ER 1110-1-8100, Laboratory Investigations And Materials Testing
- d. ER 1180-1-6, Construction Quality Management
- e. ER 415-2-100, Construction Management Policies, Procedures And Staffing For Civil Works Projects
- f. CEORDR 1110-2-36, Engineering Consideration And Instruction To Field Personnel
- g. CEORDR 415-1-4, Quality Assurance Management
- h. CEORDR 415-1-5, Biddability, Constructibility And Operability

**4. Definitions.**

a. Lessons Learned System. Automated data management system in which deficient items of work on a project are gathered and referenced during future design and construction in order to eliminate repetitiveness.

b. Peer Review. Quality Assurance audit performed by one Resident Office staff, usually Resident Engineer and Office Engineer, at another Resident Office in order to share ideas and implement the best construction management practices.

c. Partnering. An approach to conducting business that focuses on making the goals of the owner, contractor, designer, and supplier better understood and easier to manage.

d. Resident Management System. Automated construction management system designed to assist the Resident Office staff in the overall management of a contract.

e. Three Phase Control. Structured system of inspection that divides the surveillance of each definable feature of work into manageable pieces.

## **5. Responsibilities and Functions.**

a. Engineering & Construction Division. The Engineering & Construction Division is a line element responsible to the District Commander for staff supervision, assistance, coordination, review and implementation of policies regarding engineering work in the Huntington District; for staff supervision over all contract construction work of the District; and all construction by Government plant and hired labor including some major dredging, snagging and clearing work and except maintenance, wreck removal and such dredging, snagging and clearing performed by Operations and Readiness Division. In addition, Engineering & Construction Division is responsible for performing supervision of EPA Superfund work assignments in Ohio and West Virginia; grant assistance for HUD in West Virginia and part of Ohio; and military DERP projects in West Virginia and part of Ohio.

b. Management Support Branch. The Management Support Branch is responsible for the planning, directing and coordinating of the quality management and overall budgeting activities within Engineering and Construction.

(1) Quality Management Section. The Quality Management Section plans, coordinates, and manages Engineering & Construction Division's Quality Management Program; plans and coordinates partnering of construction contracts; manages the VE program; coordinates the District's VE activities; manages DCE reviews and internal peer reviews; manages the District's Lessons Learned Database and monitors and evaluates CMR performance.

### **Functions:**

- Renders administrative and/or professional advice and assistance concerning interpretation and application of policy related to quality management activities, deviations from adopted plans and specifications to field employees. Works in close liaison and maintains collaborations with the Branch Chiefs, for the purpose

of exchanging recommendations on the design or redesign of construction features, and for the purpose of expediting construction work and revisions of schedules.

- Responsible for the coordination and management of the Construction Contract Partnering Program, the A-E partnering program, and all partnering by E&C with sponsors and outside agencies.
- Responsible for effective and intelligent application of the safety program.
- Responsible for performing BCOE reviews of plans and specifications prior to contract award. Responsible for reviewing plans, specifications, and modifications and making recommendations as to feasibility and methods to be used to meet local conditions and requirements.
- Responsible for managing, planning, and coordination of Quality Control and Quality Assurance for all work performed within Engineering & Construction Division.
- Manages contractor quality training program for the District.
- Responsible for managing and updating of District's Lessons Learned Database.

c. Construction Management & Field Support Branch. The Construction Management & Field Support Branch is responsible for planning, directing, and coordinating contract management for construction, A-E, and relocations contracts; administrative control of construction Area/Resident Offices; activities associated with the environmental restoration programs for civil, military and work for other agencies, and management of the Support for Others program.

Functions:

- Prepares budget estimates for activities supervised by the branch, controls utilization of resulting funds and prepares justified requests for additional funds if required.
- Prepares FTE projections for activities supervised by the branch, oversees FTE utilization and prepares justified requests for any required FTE adjustments.
- Responsible for all Construction related reporting within the District.
- Exercises administrative control and staff supervision over area, resident and project field construction offices and is responsible to the Engineering & Construction Division Chief for the organization, planning and assignment of personnel in these offices and administration on the construction contract work.
- Coordinates and cooperates with all other District elements on all matters pertaining to the construction, A-E, relocations, support for others and environmental restoration program.
- Responsible for the execution and oversight of civil, military and support for others contract work.
- Responsible for coordinating the preparation of construction schedules and S&A estimates for study phase projects as well as construction phase projects.
- Coordinates all correspondence between construction field offices and other District Office elements.

- Prepares the technical provisions of scopes of work, independent Government Estimates, and supporting technical documentation for work to be done by outside A-E's. Participates in A-E pre-selections and selections. Provides technical oversight and review of work performed by A-E's.
- Prepares and processes a variety of administrative papers. Renders assistance in the interpretation and implementation of regulations. Spot checks administrative papers prepared by field clerks, makes corrections and advises clerks regarding deficiencies.
- Resolves work problems relating to correspondence, records, files, timekeeping, purchasing, finance and other related matters.
- Coordinates review of shop drawings by other elements.
- Responsible for reviewing plans and specifications prior to awarding contracts.; incorporating modifications or changes; and making recommendations as to feasibility and methods to be used for accomplishing modifications to meet local conditions and requirements of the installation; furnishing technical information and assisting, as required, in the negotiation and drafting of construction contracts and modifications thereto.
- Provides and/or reviews supervision and administration estimates incorporated into planning and engineering documents for projects.
- Develops and/or reviews construction schedules incorporated into planning and engineering documents on projects.
- Assigns POC's to the engineering and construction managers on all active construction contracts for the purpose of providing fiscal information, construction schedule information, and other technical data needed for input to project management reports.

(1) Area/Resident Offices. The Area/Resident Engineer is responsible to the Chief, Construction Management & Field Support Branch for project construction activity performance within the scope of authority assigned him/her and for administrative control and staff supervision of his/her assigned area.

Functions:

- Accomplishes all construction performed under their supervision in accordance with governing plans and specifications.
- Supervises and manages the Area/Resident Office and its personnel.
- Supervises and coordinates all administrative functions.
- Inspects all contract construction work including inspection of the materials and equipment which are to be incorporated in construction projects when furnished by the contractor under a construction contract including purchase orders or subcontracts issued by prime contractors.
- Inspects hired labor construction except maintenance, wreck removal, dredging, snagging, and clearing work performed by the Operations and Readiness Division.
- Prepares contractor's payment estimates and all hired labor estimates of work accomplished.

- Prepares and/or negotiates contract modifications resulting from changed field conditions, engineering design changes or deficiencies, etc., not to exceed authorized monetary limitation of \$100,000.
- Maintains proper relations with authorities, guests and Using Service officials.
- Insures strict compliance by Contractors with all provisions, specifications and drawings on all construction contracts pertaining to the contract work.
- Compiles quantitative data for use in preparation of budget and payment estimates, percentage of job completion and progress payments.
- Analyzes and approves contractors' proposed work schedules to try to avoid the establishment of a claim as a result of poor budgeting, impractical work periods and faulty procurement of materials on the part of the contractors.
- Insures progress and completion of contract work and prepares construction progress and completion reports.
- Insures that all material and equipment installed in the construction meet specification standards.
- Under general guidelines, installs, maintains, and operates instruments for the purpose of collecting technical data required for engineering and design purposes during the construction phase of a project.
- Protects the interests of the Government at all times.
- Maintains a thorough knowledge of all pertinent regulations.
- Maintains necessary records and reports.
- Assures that acceptable safety standards are maintained.
- Complies with security requirements.
- Participates in the District Affirmative Action Program.
- Maintains close coordination with Government inspectors and contractor personnel to insure that he will be aware of any changed field conditions or design discrepancies which will be reported to proper office for investigation.
- Ascertains that labor standards provisions of contracts are being complied with and notifies labor advisor of any real, apparent or anticipated violations.
- Coordinates activities to provide Quality Assurance Surveillance during hydropower construction to verify all activities of the developer are within the scope of agreements and that Corps structures and impoundments are protected at all times. Serves as liaison between Corps functional elements and as assigned supervisor of Corps observer in the field.
- Provides new employees with orientation concerning standards of conduct, safeguarding of defense information and security, plus providing additional information on safety, labor regulations and construction inspection guides.
- Receives submittal registers on ENG Form 4288 from contractors. Assures timely submission of all shop drawings from contractors.
- Serves as primary Point of Contact to the engineering and construction manager on active contracts being administered in their respective offices. POC will provide fiscal, construction schedule information, and other pertinent technical data needed for input to the project management reports.

- Performs delegated Administrative Contracting Officer functions, maintaining contracting technical liaison with Contracting Officer.

## **6. Quality Assurance Plans.**

a. District Office Annual Quality Assurance Plan. District Office Annual QA Plan shall be drafted during the month of December as a supplement to this subplan of the District Quality Management Plan. The information included in the District Office Annual QA Plan will be that of a dynamic nature such as anticipated contracts, current and anticipated organizational staffing, and annual training requirements. An outline of the information contained in the annual supplement is included as Addendum C-1.

b. Resident Office Annual Quality Assurance Plan. Resident Office Annual QA Plans shall be drafted by each Resident Office and SFO Section outlining their management strategies for construction quality management as related to the District Quality Management Plan. These plans will specifically discuss each project within the Resident Office's administrative control, the organization, responsibilities, and authorities of all quality assurance personnel, qualification requirements, and statements regarding the three phase control system. These plans shall be updated annually during the month of December. Each Resident Office Annual QA Plans shall be considered supplemental to the overall District Quality Management Plan. An outline of the information contained in the annual supplement is included as Addendum C-2.

**7. Lessons Learned.** A District Wide lessons learned system shall be implemented to capture deficiencies in plans and specifications, and installation techniques in the field. Lessons learned provided from each Resident Office shall be reviewed and entered into a District database managed by Quality Management Section. The lessons learned data base will be available for design and construction personnel during the design and construction phases of projects to ensure these deficiencies are not repeated in future work. The standard operating procedure for the collection and dissemination of Lessons Learned is included as Addendum C-3.

**8. Peer Review.** District Office QA Team Visits/Peer Review will be conducted annually at each field office. The purpose of these visits is to assist Area/Resident Engineers with their respective quality management programs, and to provide a transfer of key information learned District-wide to the Area/Resident office personnel. The primary focus of the visit will be on management of QA activities rather than technical evaluation of specific problems, but they will also be addressed. Enclosed as Addendum C-4 is the Standard Operating Procedure and Documentation Checklist that will be utilized on QA/Peer Review Visits.

## **9. Training.**

a. QA Staff.

(1) The Training Coordinator shall maintain a listing of all training by QA personnel and utilize this information when determining training needed by each individual. A training plan will be developed each year and be considered a supplement to the District Quality Management Plan for that respective year.

(2) Training for all QA personnel shall be related to each employee's Individual Development Plan (IDP). It shall be the responsibility of the supervisor to ascertain the training needs of his or her employees with an eye to current and future work and career development.

(3) Courses that can be given "in-house" (exportable) shall be utilized to the fullest extent possible. Every employee shall attend at least one course per year depending on funding. It shall be the responsibility of Quality Management Section to oversee and/or conduct the exportable training. The Chief, EC shall approve each year's exportable training program.

(4) Training can take the form of prospect, exportable, correspondence, OJT, and independent studies where employees use their own initiative and funds.

(5) All professional and non-professional personnel shall pursue registration in their field of endeavor. It is the responsibility of each supervisor to encourage his employees to pursue certification and/or registration.

b. Contractor Quality Control Personnel. Construction Quality Management (CQM) Training for Contractors. Pursuant to Construction Bulletin 94-20 it is incumbent upon the Corps to certify contractors and potential contractors as having taken the aforementioned training. Quality Management is the lead element for this endeavor and is working with contractors that have recently been awarded contracts as well as other interested contractors to provide the CQM training. The training is currently being offered semi-annually or on an as needed basis.

**10. Partnering.** Partnering shall be employed on all contracts in which the contractor is agreeable to the concept and principles of partnering for attainment of common goals. The level and option of Partnering will be based upon the value and complexity of the project. Partnering will be formalized by an initial partnering conference at which an agreement shall be drafted as the project charter. This agreement will serve as the road map for all parties on how they will approach the contract to the mutual benefit of all involved. The partnering conferences will be facilitated meetings by either in-house or contract facilitators. Follow-up meetings to the initial partnering meeting will be at the discretion of the partners. An example of a partnering agreement is shown as Addendum C-5.

**11. Resident Management System.** The Resident Management System (RMS) shall be employed on all construction contracts managed within the Huntington District. This automated

documentation system will aid each field office in administratively capturing and connecting each phase of the construction management process to ensure quality, schedules, payments and project documentation are completed.

**12. Pre-Award Activities.** The quality management of technical products within the District is outlined in the District Quality Management Plan as Appendices B and D respectively. As part of the review process, it is imperative that personnel with vast knowledge of construction principles and practices participate in the Technical Review of a project as part of the ITR team. This review is in addition to the Biddability, Constructibility, Operability, and Environmental Review performed prior to award of a contract. The BCOE review shall be performed by both District Office personnel as well as Resident Office personnel charged with the administration of the particular contract in accordance with CEORHR-1110-2-3. During the BCOE process the Resident Office staff also shall conduct "Plan-in-Hand" reviews at the project site to assure any changed site conditions are addressed appropriately

**13. Post Award Activities.**

a. QA Surveillance - District Office. The District Office will provide support to all the Resident Offices in pursuit of quality construction. This support will come in the form of technical expertise on shop fabricated items and installation in the field, materials certifications, coordination with inspection laboratories (WES, CERL, MRD), quarry inspections, contract administration, and policy issues.

b. QA Surveillance - Area/Resident Offices. The Contractors and the Government both have a role in obtaining quality construction consistent with the contract requirements. The responsibilities of both parties must intermesh and both organizations must work harmoniously.

(1) The contractor or CQC is responsible for producing the product on time and in compliance with the requirements of the contract through the establishment and utilization of a CQC Plan. This plan must be of the scope and character necessary to achieve the level of quality outlined in the contract documents, performing work in a safe and healthy manner, and producing and maintaining acceptable records of control, inspection and testing activities. QA personnel must review and approve the CQC Plan prior to commencement of work. A CQC Plan checklist to be utilized during the plan review is shown as Addendum C-6 of this subplan.

(2) QA personnel must be thoroughly knowledgeable of contract requirements on each definable feature of work; participate in preparatory, initial and follow-up control phase meetings; make joint inspections with the CQC personnel to evaluate their effectiveness; conduct QA tests to verify CQC testing; review CQC Reports for completeness and accuracy; note and prompt correction of deficiencies and control problems. QA efforts at the preparatory and initial control phases are particularly effective since correction of minor deficiencies at early stages avoids the tendency for them to become magnified later.



(3) The three-phase control is the most important aspect of CQC. The most critical function at the commencement of any construction task or activity is the thoroughness in which the contract requirements are understood and implemented on each definable feature of work. This is applicable to both the Contractor and the Government. The preparatory control phase conducted prior to beginning any physical work of a definable feature of work will ascertain that materials comply with specifications and/or approved submittal documents. The initial control phase occurring at the outset of the work placement will establish and achieve workmanship standards at the beginning of physical work for all subsequent work to match. Follow-up control is accomplished on a daily or routine basis. Contractor prepared minutes of preparatory and initial phases will document attendance and content discussed during the meetings. Sample documentation sheets for three-phase control inspections are included as Addendum C-7.

(4) Government QA personnel must be quick to act when any aspect of the CQC is not working as planned. When CQC fails to achieve the desired results, the following questions must be asked: What caused this to happen? What needs to be improved in the CQC Plan to prevent this from happening again? The answers to these questions should govern your decisions on what changes must be requested in the CQC Plan. The primary responsibility for overall management and control of quality construction lies with the prime contractor. The monitoring of CQC to assure he/she is achieving quality work is the responsibility of QA.

c. Testing. QA testing will be performed unannounced, in accordance with applicable test standards, and under any of the following circumstances:

(1) When it is suspect that materials do not meet the contract requirements and/or there are no provisions in the contract for testing;

(2) When the CQC test results indicate failure and the contractor is reluctant to retest/correct the area(s) that have failed;

(3) When the Resident Engineer feels there is the possibility that the results of CQC testing are fraudulent, inaccurate, or when the materials are obviously unsuitable contrary to any test results;

(4) When periodic verification of CQC tests are conducted. QA testing will include but is not limited to:

- Materials Testing
- Non-Destructive Weld Tests
- Hydraulic Oil Analysis
- Paint Testing
- Electrical Systems Testing

**14. Quality Indicators.** Quality Indicators shall be used by Engineering & Construction Division as a tool to improve construction product quality. Quality Indicators are warning signs of the Contractors Quality Control process weaknesses. If weaknesses are found, actions will be taken by the Resident Engineer to improve the Quality Control system. Below are Quality Indicators that will be monitored:

a. Testing. Testing will be used a quality indicator as described in para. 13.c. Failure of tests will require action by the Resident Engineer.

b. Deficiency List. Deficient items constructed by the contractor is keep by the Resident Offices. Any item that makes this list reflect a breakdown of the Contractors Quality Control. Excessive items on the list will require action by the Resident Engineer.

7 Addendum's:

- C-1 - Suggested Outline - District Office Annual QA Plan
- C-2 - Suggested Outline - Resident Office Annual QA Plan
- C-3 - Standard Operating Procedure, Lessons Learned
- C-4 - Standard Operating Procedure, District Peer Review Visits
- C-5 - Sample Partnering Agreement \*
- C-6 - Contractor Quality Control Plan Evaluation
- C-7 - Sample Documentation Sheets for Three Phase Control Inspections \*

**ADDENDUM C-1**

**Suggested Outline - District Office Annual QA Plan**

ADD C-1  
CELRHR 5-2-7  
1 May 99

## **SUGGESTED OUTLINE - DISTRICT OFFICE ANNUAL QA PLAN**

- I. PURPOSE AND SCOPE
  - A. ESTABLISHES QA ANNUAL OPERATING PLAN
  - B. PERIOD COVERED
- II. WORKLOAD
  - A. CONTRACTS UNDERWAY
  - B. ANTICIPATED CONTRACTS
- III. ORGANIZATION
  - A. DESCRIPTION
  - B. ORGANIZATIONAL CHART
- IV. STAFFING
  - A. CURRENT
  - B. REQUIRED (KEYED TO WORKLOAD)
- V. TRAINING
  - A. ANNUAL PLAN
  - B. NEEDS ANALYSIS

**ADDENDUM C-2**

**Suggested Outline - Resident Office Annual QA Plan**

**SUGGESTED OUTLINE - RESIDENT OFFICE ANNUAL QA PLAN**

- I. PURPOSE AND SCOPE
- II. REFERENCES
- III. CURRENT PROJECT DESCRIPTIONS AND FACTS
- IV. DUTIES AND RESPONSIBILITIES
- V. SPECIAL CONSIDERATIONS FOR QA STAFF
- VI. DEFICIENCY MANAGEMENT PLAN
- VII. ENGINEERING CONSIDERATIONS AND INSTRUCTIONS TO FIELD PERSONNEL
- VIII. SUPPLEMENTS
  - A. DEFINABLE FEATURES OF WORK
  - B. THREE PHASE CONTROL SYSTEM
  - C. INSTRUCTIONS TO FIELD PERSONNEL
  - D. SAMPLE FORMS
  - E. SAMPLE CHECKLISTS
  - F. RESIDENT OFFICE SAFETY POLICY

**ADDENDUM C-3**

**Standard Operating Procedure, Lessons Learned**

**STANDARD OPERATING PROCEDURE  
LESSONS LEARNED**

1. An automated Lessons Learned database will be maintained by the Huntington District.
2. The Quality Management Section will be responsible for maintaining the District's Lessons Learned database. The Quality Management Section will designate a POC who will serve as the District's coordinator for this program.
3. Each Resident Office will designate a representative of their office to serve as its lessons learned coordinator for the purposes of gathering lessons learned on all projects within their administrative control.
4. Each Resident Office Representative will be responsible for providing the Quality Management Section with their lessons learned update on a monthly basis. These monthly updates are due to the District Coordinator on 1st day of each month.
5. The District's Coordinator for the Lessons Learned program will then be responsible for reviewing and coordinating a review with the appropriate technical element prior to approving and incorporating these updates into the District's data base.
6. The District coordinator will be responsible for ensuring that the appropriate technical elements are aware of the Lessons Learned system and provide the necessary training on accessing the information. Awareness of the system will come in the form of a newsletter type document disseminated throughout Engineering and Construction Division. Included in the newsletter will be instructions on how to access the system as well as the advantages to having such a resource available. Additionally, the District Coordinator will visit each technical element within Engineering Construction Division to provide a system demonstration and answer any questions the system users may have.



**ADDENDUM C-4**

**Peer Review SOP and Documentation Checklist**

**STANDARD OPERATING PROCEDURE,  
DISTRICT PEER REVIEW VISITS**

1. Peer Review Visits will be conducted at every Resident Office annually with Quality Management Section being the coordinating office.
2. Peer Review Visits will be scheduled at least two months in advance.
3. The length of the Peer Review Visit will be one day.
4. A Resident Engineer and the Office Engineer (or other designated representative as determined by the Resident Engineer) from one RE Office will visit another RE Office and perform a review of the Construction Management procedures utilized by the RE Office. Additionally, the Re and OE will be accompanied by the Chief, Quality Management Section and Chief, CELRH-CD-A.
5. The Peer Reviews will concentrate on Contract Administration and Quality Management procedures at each office and will include a paper work review as well as a project site visit.
6. The Peer Review Visit will be documented on the "Huntington District Documentation Checklist" provided as Attachment 1 to this SOP.
7. At the conclusion of the visit, the Resident Engineer and Staff will be out briefed on the findings and provided a copy of the Documentation Checklist for appropriate action.
8. Correction of documented deficiencies will be commented on in writing by the Resident Engineer and coordinated with Chief, Quality Management Section or Chief, CD-A.
9. The Peer Review Visit documentation file will be maintained in the Construction Division Office.
10. A consolidated list of comments from each Peer Review Visit will be provided to the Assistant Chief and Chief, Construction Division.
11. The Documentation Checklist from all Peer Review Visits will be collected by Chief, Quality Management Section, consolidated and an informational copy will be provided to each RE Office. The consolidated list of comments will not list the RE Office that generated the comment but will be a source of ideas for RE Office process improvement and standardization where applicable.

HUNTINGTON DISTRICT  
DOCUMENTATION CHECKLIST

(NOTE: This checklist to be used in Peer Review Team Visits, is patterned after similar list utilized by HQUSACE and ORD in their Design/Construction Evaluations)

\_\_\_\_\_  
(Responsible Resident Office) (Date of Visit)

\_\_\_\_\_  
(QA Visit Team Members)

**\*\*JOB DATA**

\_\_\_\_\_  
(Contract Number)

\_\_\_\_\_  
(Project Name) (Project Location)

\_\_\_\_\_  
(Project Description)

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_  
(Award Amount) (Number of Modifications) (Total Amount of Modifications) (Cost Growth %)

\_\_\_\_\_  
(Original Completion Date) (Original Contract Time in Calendar Days) (Number of Days added By Mods) (Current Completion Date) (Time Growth %)

\_\_\_\_\_  
(Construction Representative) (Field Office Project Engineer) (Schedule Completion %) (Actual Completion %)

\_\_\_\_\_  
(Name of Partnership) (Date of Initial Partnership Meeting) (First Day of Physical Work on Site)

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**\*\*BCOE REVIEWS:**

Was a BCOE review conducted by the field office? ( )YES ( )NO

What disciplines performed the BCOE review? \_\_\_\_\_

Was adequate time allowed for the field BCOE review? ( )YES ( )NO

Was feedback received on BCOE comments? ( )YES ( )NO

REMARKS:

\_\_\_\_\_

**\*\*QUALITY ASSURANCE:**

ADD C-4  
CELRHR 5-2-7  
1 May 99

Was a copy of Project Management Plan received? ☐YES ☐NO  
(These are furnished by PPMD)

Has the F.O. QA Plan been updated within the past year? \_\_\_\_\_

Was a job supplement to the QA Plan Prepared? \_\_\_\_\_ ☐YES ☐NO  
(Data of Job Supplement)

Do Construction Rep/Proj. Engr. have a copy of QA Plan & Supplement? ☐YES ☐NO

Was the video "A Bridge(or Pathway) To Success" shown to the Contractor? ☐YES ☐NO

Where minutes written of the Coordination Meeting? ☐YES ☐NO

Are Coordination Mtg. Minutes signed by both government & contractor? ☐YES ☐NO

How is QA Testing being accomplished ☐GOVT ☐Commercial ☐Neither

\_\_\_\_\_  
(Commercial Laboratory Name/ Location)

\_\_\_\_\_  
(Date lab inspected by ORD)

Are 3-Phase Control Meetings attended? ☐Never ☐Sometimes ☐Always

Does the Construction Division Rep/Proj. Engr. have a copy of EP 415-1-261? ☐YES ☐NO  
(EP 415-1-261 has 4 volumes and is called Quality Assurance Representative's Guide)

Are DCAF Bulletins & Code Forums given as lessons learned to CQC? ☐YES ☐NO

Is QA Report content ... ☐Good ☐Adequate ☐Poor

Are QA Reports initialed? ☐YES ☐NO  
(ER 1180-1-6)

Is QA being performed at fabrication shops for items constructed off-site? ☐YES ☐NO

Are these visits to off-site facilities coordinated with Resident Offices and other functional elements for support? ☐YES ☐NO

REMARKS

Was QC Plan submitted & accepted prior to the start of physical work? ( )YES ( )NO

Is the QC Organization shown in the contractor's QC Plan? ( )YES ( )NO

Are Qualification of QC personnel given? ( )YES ( )NO

(Must include supplemental QC personnel an back-up QC System Manager)

Does the QC System Manager meet the qualifications in the Contract? ( )YES ( )NO

Are delegation letters included in the QC Plan? ( )YES ( )NO

(Must also include delegation letters to supplemental personnel as well as the QC System Manager)

Are the Submittal procedures described in the QC plan? ( )YES ( )NO

Are the Definable Features of Work identified in the QC Plan ( )YES ( )NO

Are the 3-Phase of Control discussed in the QC Plan? ( )YES ( )NO

Is the Deficiency Tracking System described in the QC Plan? ( )YES ( )NO

Is an updated Deficiency List submitted monthly? ( )YES ( )NO

Are planned QC testing identified in the QC Plan? ( )YES ( )NO

Who is the QC Testing Laboratory? \_\_\_\_\_

\_\_\_\_\_  
(Date lab Inspected by ORD)

Are the QC reports made daily? ( )YES ( )NO

Is report submitted the next day? ( )YES ( )NO

Are Preparatory & Initial Control Phases Minutes attached to the QC Reports? ( )YES ( )NO

(Must be one for each Definable Feature of Work)

Are QC Test reported and results interpreted? ( )YES ( )NO

Are Daily Safety Inspections made of work site and recorded on QC Report? ( )YES ( )NO

(EM 385-1-1.01.A.08.b.)

Are QC activities for off-site fabrication addressed? ( )YES ( )NO

Is the QC Report content.....( )Good ( )Adequate ( )Poor

REMARKS

\_\_\_\_\_  
\_\_\_\_\_

**\*\*CONTRACTOR'S SAFETY & OCCUPATIONAL HEALTH:**

Was a Accident Prevention Plan submitted? ☐YES ☐NO

[Contract Clauses –ACCIDENT PREVENTION paragraph(f)(1)]

Was the Accident Prevention Plan Accepted prior to work starting? ☐YES ☐NO

[Contract Clause—ACCIDENT PREVENTION PAR.(F)(1),and EM 415-1-1-01-A-07]

Was an Accident Prevention Meeting held with the government? ☐YES ☐NO

[Contract Clause – ACCIDENT PREVENTION par/(f)(1),and EM415-1-2601,Section 9,par 9-1]

Are minutes of this Pre-Construction Safety Conference on file? ☐YES ☐NO

[EM 415-1-260 Sec.9 par 9-4c, and Appendix C]

Are Activity Hazard Analysis prepared prior to each major phase of work? ☐YES ☐NO

(EM385-1-1,01 A 09 0)

Are Employee Initial Indoctrination conducted and documented? ☐YES ☐NO

(EM 385-1-1,01 B)

Are Weekly Meetings for all construction workers being accomplished? ☐YES ☐NO

(EM 385-1-1,o.B03.a.)

Are monthly Supervisor Meetings being held? ☐YES ☐NO

(EM 385-1-1 01 B 04)

Are Material Safety Data Sheets (MSDS) available at the work site? ☐YES ☐NO

(EM 285-1-1 010B 04)

How is the Construction job site housekeeping? ☐Excellent ☐Good ☐Poor

(Contract Clause –Cleaning Up, and EM 385-1-1,14C)

Is ORD Form 892 being used? ☐YES ☐NO

(ORD Form 892 is a Safety Inspection Checklist For Construction Equipment i.e. Cranes, Shovels, Derricks, Pavers, Loaders, Dump Trucks,, And Similar Heavy Equipment) (ORD Form is subject of All Areas Engineers Memorandum, 3 Aug 90)

REMARKS AND/OR SAFETY COMMENTS--

1 Feb 96

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**\*\*SAFETY & OCCUPATIONAL HEALTH AT THE FIELD OFFICE:**

Does field office have an Accident Prevention Plan? ☐YES ☐NO  
(EM 385-1-1.A.05.)

Are Activity Hazard Analysis included in the plan? ☐YES ☐NO  
(EM385-1-1.01.A.06 & 01.A.10; and All Area Engineers Memorandum, 14 Jan 91)

Have new employees received the Safety Indoctrination? ☐YES ☐NO  
(EM 385-1-1.01.B)

Have all employees taken Defensive Driving Refresher in the last three years? ☐YES ☐NO

Are employees attending Safety Training at least monthly? ☐YES ☐NO

Where Job Site Safety Briefings given before team went on construction sites? ☐YES ☐NO  
(All Area Engineers Memorandum, 17 Mar 93, SUBJECT: Job Site Safety Briefings)

**REMARKS**

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**\*\* MISCELLANEOUS:**

Does field office have a current MOU (s) with its customer (s)? ☐YES ☐NO  
(MOU is a Memorandum of Understanding, ER 415-345-38, par 4; and All Area Engineers Memorandum, 1 Nov 89)  
(HQUSACE wrote up the District because current facility commanders knew nothing about this document)

**REMARKS**

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ADD C-4  
CELRHR 5-2-7  
1 May 99

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1 Feb 96

Supplemental Sheet



**ADDENDUM C-5**

**Sample Partnering Agreement**



US Army Corps  
of Engineers  
Huntington District

DNR  
West Virginia  
Division of  
Natural Resources

FRU-CON

## MISSION STATEMENT

As the partners in the Robert C. Byrd On Site Mitigation & Recreation Project, our mission is to construct a quality state-of-the-art fish hatchery system and recreation area and to ensure the success of the mission by safely delivering a quality construction project in a timely, environmentally sound, professional manner, within budget and at a reasonable profit. This will be accomplished through open communications, innovation, trust, teamwork, respect, and mutual understanding.

## GOALS AND OBJECTIVES

### I. Effective Project Leadership / Management

- Maintain Open and Objective Communication
  - Listen to the Customer
- Schedule Awareness and Management
  - Minimize Cost Growth
- Responsive to Issues and/or Problems
  - Customer Satisfaction
- Receptiveness and Monitoring of Partnering Issues
  - Award Options as Expeditiously as Possible

Paul Bews

Dain H. White

Joe Kennedy

James D. Valtierra

Wayne E. Budson

G. Michael Wiley

Steven P. Morgan

### II. Safe Project

- Zero Violations
- Compliance with EM 385-1-1 and OSHA
- Regular Safety Meetings to Maintain Safety Awareness at all Levels
  - Zero Accidents
- Maintain Drug-Free Workplace
  - Safety is for Everyone
- Continue Training and Education
- Develop and Follow Job Hazard Analysis
  - Pre-Activity Safety Meeting
- Recognize and Reward Safety Records and Efforts
  - Sustain Commitment to Safety
  - Practice Risk Reduction

Sandy D. Nesmith

Mike Phillips

James L. Gould

John B. B...

### III. Quality

- Customer Satisfaction
- Product that Complies with Specifications, Codes, and Standards
  - "Zero Defects" and "Minimize Re-Work"
- Effective and Efficient Work Practices and Procedures
  - Cooperation & Teamwork
- Provide a Safe, Reliable, Environmentally Sound, and Operational End-Product

Robert L. Hoff

Rodney null

### IV. Maintain Partnering Spirit

- Maintain Mutual Respect
  - Share Responsibility
- Encourage Open, Candid Communications
  - Eliminate Hidden Agendas
  - Defuse Hostilities
- Resolve Problems Quickly & at Lowest Level
  - Share Information
- Follow-up Partnering Conference
  - Support a Fair Profit
- Slay the Old—Nurture the New (Paradigms)
  - Be Inclusive in Decision Making

Robyn D. Cernan

Mike Rohinette

Will A. Mill

Jimmie Kline

Dana Robertson

Red F. Vest

**ADDENDUM C-6**

**Contractor Quality Control Plan Evaluation**

## CONTRACTOR QUALITY CONTROL PLAN EVALUATION

1. Contract DACW69-\_\_-\_\_, \_\_\_\_\_  
\_\_\_\_\_

2. Date of original plan \_\_\_ or revision \_\_\_ being evaluated: \_\_\_\_\_

3. Evaluation (check "YES" only if item is addressed and in compliance):

a. Organization: YES NO NA

(1) Lines of authority identified  
by organization chart \_\_\_\_\_

(2) Acknowledgment that CQC staff  
shall conduct 3-phase inspections  
for all features \_\_\_\_\_

(3) CQC staff reports to project  
manager someone higher in  
the organization \_\_\_\_\_

(4) Staff adequately sized for  
project \_\_\_\_\_

(5) Alternates identified \_\_\_\_\_

(6) Comments on organization: \_\_\_\_\_  
\_\_\_\_\_

b. Personnel and assignments (for each person assigned a QC function):

YES NO NA

(1) All personnel hired by/work for  
prime \_\_\_\_\_

(2) Qualifications (resume of  
training and experience)  
furnished for each person \_\_\_\_\_

(3) Duties of each clearly  
defined \_\_\_\_\_

(4) Responsibilities clearly

defined \_\_\_\_\_

(5) Authorities clearly defined \_\_\_\_\_

(6) Deficiency identification, correction, and documentation responsibilities defined \_\_\_\_\_

(7) Comments on personnel and assignments: \_\_\_\_\_

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c. Letter of responsibilities and authorities addressed to the QC manager:

YES NO NA

(1) Copy furnished \_\_\_\_\_

(2) Signed by authorized firm official. \_\_\_\_\_

(3) Adequately addresses authorities and responsibilities \_\_\_\_\_

(4) Comments on letter content: \_\_\_\_\_

---

d. Submittals (for prime, and all subcontractors, fabricators, suppliers, and purchasing agents):

YES NO NA

(1) Management procedures:

(a) Submittals manager identified \_\_\_\_\_

(b) Manager's duties identified \_\_\_\_\_

(c) Certification authority identified \_\_\_\_\_

(d) Subs submitting through prime \_\_\_\_\_

(2) Scheduling procedures:

(a) Initial register  
addressed

\_\_\_\_\_

(b) Register related to  
schedule

\_\_\_\_\_

(c) 60-day interval updates  
addressed

\_\_\_\_\_

(3) Comments on submittals:\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

e. Control testing procedures YES NO NA

(1) Definable features

\_\_\_\_\_

(2) Three-phase inspection  
procedures addressed

\_\_\_\_\_

(3) QC laboratory identified

\_\_\_\_\_

(4) Specified tests, specification,  
and personnel or lab  
responsible listed

\_\_\_\_\_

(5) Testing frequencies  
listing

\_\_\_\_\_

(6) Qualifications of staff adequate  
for control and test  
requirements

\_\_\_\_\_

(7) Comments on testing procedures:\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

f. Reports YES NO NA

(1) Reporting procedure

addressed (Including off-site  
 fabrication) \_\_\_\_\_

(2) Form for documenting  
 preparatory inspections  
 furnished. \_\_\_\_\_

(3) Form for documenting initial  
 inspections furnished \_\_\_\_\_

(4) Forms furnished for each  
 specified test as appropriate \_\_\_\_\_

(5) Comments on reports: \_\_\_\_\_

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g. Daily report form

YES NO NA

(1) Space for date and  
 report number \_\_\_\_\_

(2) Space for contract and  
 project \_\_\_\_\_

(3) Space for describing weather,  
 temperature and  
 precipitation. \_\_\_\_\_

(4) Space for listing contractor,  
 subs and areas of responsibility \_\_\_\_\_

(5) Space for listing work  
 performed. \_\_\_\_\_

(6) Space for inspections and  
 results (Including off-site  
 fabrication) \_\_\_\_\_

(7) Space for tests performed and  
 results \_\_\_\_\_

ADD C-6  
CELRHR 5-2-7  
1 May 99

(8) Space for verbal  
instructions \_\_\_\_\_

(9) Space for remarks. \_\_\_\_\_

(10) Space for safety  
comments \_\_\_\_\_

(11) Contractor's certification  
stated \_\_\_\_\_

(12) Space for QC Manager's  
signature \_\_\_\_\_

(13) Comments on daily report form \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

4. Evaluator: \_\_\_\_\_ Date: \_\_\_\_\_



**ADDENDUM C-7**

**Sample Documentation Sheets for Three Phase Control Inspections**

## PREPARATORY INSPECTION EVALUATION

DEFINEABLE FEATURE OF WORK : P.S. CONTROL ROOM PLUMBING

### A. ACTIVITIES INCLUDED UNDER P.S. CONTROL ROOM PLUMBING -

#### BRUNER CORPORATION -

320	Delivery-Plumbing, pipe & Fitti	\$	1,091
10550	Install Plumbing and Fixtures	\$	13,600
		\$	14,691

### B. QUALITY CONTROL REQUIREMENTS -

#### SUBMITTALS REQUIRED -

15250	1	MFG'S INSTR	THERMAL INSULATION MATERIALS	- Not Submitted
15250	2	RECORDS	THERMAL INSULATION MATERIALS	- Not Submitted
15250	3	SAMPLES	THERMAL INSULATION MATERIALS	- Not Submitted
15400	9	CERTIFICATES	MATERIALS AND EQUIPMENT	- Not Submitted
15400	10	DRAWINGS	PLUMBING SYSTEM	- Not Submitted
15400	11	REPORTS	TESTS, FLUSHING AND STERILIZATION	- Not Submitted
15400	12	O&M MANUALS	PLUMBING SYSTEM	- Not Submitted
15895	4	O&M MANUALS	AIR SUPPLY, DISTRIBUTION, VENTILATION, A	- Not Submitted
15895	5	MFR'S DATA	COMPONENTS AND EQUIPMENT DATA	- Not Submitted
15895	6	SHOP DRAWINGS	AIR SUPPLY, DISTRIBUTION, VENTILATION, A	- Not Submitted
15895	7	REPORTS	AIR BALANCE TEST REPORTS	- Not Submitted
16055	4	DRAWINGS	HEATING EQUIPMENT	- Not Submitted

### C. QA/QC COMMENTS -

INCLUDE ADDITIONAL COMMENTS ON DAILY REPORT -

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### E. LABOR RATES -

LABOR CLASSIFICATIONS	BASIC RATE	FRINGE BENEFITS	PLUS %	TOTAL WAGE/HR

### F. REVIEW CONTRACT DRAWINGS AND SPECIFICATIONS -

DRAWING / SPEC. NO.	COMMENTS / CONFLICTS

## PREPARATORY INSPECTION EVALUATION

DEFINEABLE FEATURE OF WORK : P.S. CONTROL ROOM PLUMBING

### F. REVIEW CONTRACT DRAWINGS AND SPECIFICATIONS - Cont.

	DISCUSSED Yes/ No/ NA
1. _____	_____
2. _____	_____
3. _____	_____
4. _____	_____

### G. REPETITIVE DEFICIENCIES FOUND ON PREVIOUS PROJECTS -

	DISCUSSED Yes/ No/ NA
1. _____	_____
2. _____	_____
3. _____	_____
4. _____	_____

### II. INSPECTION CHECKS -

	IN COMPLIANCE Yes/ No/ NA
1. _____	_____
2. _____	_____
3. _____	_____
4. _____	_____

### I. JOB SITE SAFETY -

EQUIPMENT (attach check list)	REMARKS	IN COMPLIANCE Yes/ No/ NA
_____	_____	_____
_____	_____	_____
_____	_____	_____
1. Has the HAZARD ANALYSIS PLAN been accepted? (Attach copy)	_____	_____
2. _____	_____	_____
3. _____	_____	_____
4. _____	_____	_____
5. _____	_____	_____

### J. QUALITY ASSURANCE EVALUATION NOTES -

	Yes/ No/ NA
1. Did the contractor conduct a thorough inspection?	_____
2. Is the contractor's QC STAFF qualified to inspect this feature?	_____
3. Is the contractor adequately prepared to begin work under the feature?	_____
4. _____	_____
5. _____	_____
6. _____	_____
7. _____	_____

# INITIAL INSPECTION EVALUATION

DEFINEABLE FEATURE OF WORK : P.S. CONTROL ROOM PLUMBING

## A. ACTIVITIES INCLUDED UNDER P.S. CONTROL ROOM PLUMBING -

### BRUNER CORPORATION -

320	Delivery-Plumbing, pipe & Fitti	\$	1,091
10550	Install Plumbing and Fixtures	\$	13,600
		\$	14,691

## B. QUALITY CONTROL REQUIREMENTS -

### SUBMITTALS REQUIRED -

15250	1	MFG'S INSTR	THERMAL INSULATION MATERIALS	-	Not Submitted
15250	2	RECORDS	THERMAL INSULATION MATERIALS	-	Not Submitted
15250	3	SAMPLES	THERMAL INSULATION MATERIALS	-	Not Submitted
15400	9	CERTIFICATES	MATERIALS AND EQUIPMENT	-	Not Submitted
15400	10	DRAWINGS	PLUMBING SYSTEM	-	Not Submitted
15400	11	REPORTS	TESTS, FLUSHING AND STERILIZATION	-	Not Submitted
15400	12	O&N MANUALS	PLUMBING SYSTEM	-	Not Submitted
15895	4	O&N MANUALS	AIR SUPPLY, DISTRIBUTION, VENTILATION, A	-	Not Submitted
15895	5	MFR'S DATA	COMPONENTS AND EQUIPMENT DATA	-	Not Submitted
15895	6	SHOP DRAWINGS	AIR SUPPLY, DISTRIBUTION, VENTILATION, A	-	Not Submitted
15895	7	REPORTS	AIR BALANCE TEST REPORTS	-	Not Submitted
16855	4	DRAWINGS	HEATING EQUIPMENT	-	Not Submitted

## C. QA/QC COMMENTS -

INCLUDE ADDITIONAL COMMENTS ON DAILY REPORT -

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## E. LABOR RATES -

LABOR CLASSIFICATIONS	BASIC RATE	FRINGE BENEFITS	PLUS %	TOTAL WAGE/HR

## F. INSPECTION CHECKS -

1.		IN COMPLIANCE
2.		Yes/ No/ NA
3.		
4.		

## G. JOB SITE SAFETY -

EQUIPMENT (attach check list)	REMARKS	IN COMPLIANCE
		Yes/ No/ NA

## INITIAL INSPECTION EVALUATION

DEFINEABLE FEATURE OF WORK : P.S. CONTROL ROOM PLUMBING

### G. JOB SITE SAFETY - Cont.

IN COMPLIANCE  
Yes/ No/ NA

- |   |       |       |
|---|-------|-------|
| _____   | _____ | _____ |
| _____   | _____ | _____ |
| 1. Has the HAZARD ANALYSIS INSPECTION been conducted? | _____ | _____ |
| 2. _____  | _____ | _____ |
| 3. _____  | _____ | _____ |
| 4. _____  | _____ | _____ |
| 5. _____  | _____ | _____ |

### II. QUALITY ASSURANCE EVALUATION NOTES -

Yes/ No/ NA

- |          |       |
|----------|-------|
| 1. _____ | _____ |
| 2. _____ | _____ |
| 3. _____ | _____ |
| 4. _____ | _____ |

Phase 2B - Dodge Park Pump Station  
CONTRACT NO. DACW69-96-C-0026  
Columbus, OH

31 Mar 98

**FINAL FOLLOW-UP**

QC RATING: O-OUTSTANDING A-ABOVE AVERAGE S-SATISFACTORY M-MARGINAL U-UNSATISFACTORY N-NOT APPLICABLE

**SLUICE GATE AND FLAP VALVES -**

7450 - QC Rating ( ) for Install 96" x 72" Gate -

7460 - QC Rating ( ) for Install 72" x 72" Gate -

7510 - QC Rating ( ) for Install 36" Flap Gates -

RANGE : SLUICE GATE AND FLAP VALVES

SORT : ACTIVITY

## FINAL FOLLOW-UP

QC RATING: O-OUTSTANDING A-ABOVE AVERAGE S-SATISFACTORY M-MARGINAL U-UNSATISFACTORY N-NOT APPLICABLE

### BOX CULVERT -

5890 - QC Rating ( ) for Exc., Lav, BF 4'x8' RCB-3 to 4 -

### CATCH BASINS -

12005 - QC Rating ( ) for Catch Basins -

### CHAINLINK FENCE -

6980 - QC Rating ( ) for Install Chain Link Fence -

### CLEARING AND GRUBBING -

6990 - QC Rating ( ) for Clear and Grub Around P.S. -

12000 - QC Rating ( ) for Clear and Grub 4 ACS. -

### DEMOLITION - PAVEMENT -

8050 - QC Rating ( ) for Remove Pavement Skidmore/Sulli -

8060 - QC Rating ( ) for Remove sidewalk and curb east -

8070 - QC Rating ( ) for Remove pavement Skidmore St. -

8080 - QC Rating ( ) for Remove sidewalk and curb west -

8090 - QC Rating ( ) for Remove pavement Rich St. and S -

9000 - QC Rating ( ) for Remove Pavement on Rich Street -

### DEMOLITION - UTILITIES -

5100 - QC Rating ( ) for Demo Exist. MH & Cut Pipes -

5390 - QC Rating ( ) for Sawcut Pipe & Install flume -

7234 - QC Rating ( ) for Remove Ext. 72" RCP & Plug -

9030 - QC Rating ( ) for Demo 30"/36" BRICK SEWER -

9040 - QC Rating ( ) for Demo 8" VCP -

9060 - QC Rating ( ) for Demo MH 5+10 on P-6 -

9070 - QC Rating ( ) for Demo MH 7+10 on P-6 -

9080 - QC Rating ( ) for Demo MH 7+00 on P-6 -

9090 - QC Rating ( ) for Demo MH 9+08 on P-6 -

10000 - QC Rating ( ) for Demo MH 9+43 on P-6 -

10010 - QC Rating ( ) for Demo MH 4+21 on P-14 -

**FINAL FOLLOW-UP**

QC RATING: O-OUTSTANDING A-ABOVE AVERAGE S-SATISFACTORY M-MARGINAL U-UNSATISFACTORY N-NOT APPLICABLE

**DEMOLITION - UTILITIES - Cont.**

10270 - Demo MH - Cont.

10270 - QC Rating ( ) for Demo MH -

**DEWATERING/GROUNDWATER CONTROL -**

7040 - QC Rating ( ) for Install Dewatering System -

7410 - QC Rating ( ) for Pull Dewatering System -

**DOORS AND FRAMES -**

10570 - QC Rating ( ) for Install Doors -

**ELECTRICAL -**

7540 - QC Rating ( ) for Start Up/Checkout Sump Pump -

**ENVIRONMENTAL PROTECTION -**

2166 - QC Rating ( ) for Install Environmental Protecti -

**EXCAVATION - SHORING/SHEETING -**

7030 - QC Rating ( ) for Install Excavation Support Sys -

7050 - QC Rating ( ) for Install Pipe Supports 6' C-C -

7180 - QC Rating ( ) for Crib Exist. 72' RCP -

7190 - QC Rating ( ) for Remove Shoring Supports -

10475 - QC Rating ( ) for Remove Pipe Supports -

**EXCAVATION/FILLING FOR PS/MHS -**

6940 - QC Rating ( ) for Rough Grade Road/place aggr -

7000 - QC Rating ( ) for Remove Existing Road -

7010 - QC Rating ( ) for Strip and Stockpile Top Soil -

7020 - QC Rating ( ) for Excavate to 695' -

7060 - QC Rating ( ) for Excavate to 681' -

7150 - QC Rating ( ) for BP for SOG @ 691.12' -



## FINAL FOLLOW-UP

QC RATING: O-OUTSTANDING A-ABOVE AVERAGE S-SATISFACTORY M-MARGINAL U-UNSATISFACTORY N-NOT APPLICABLE

### EXCAVATION/FILLING FOR PS/MHS - Cont.

7245 - BF Structure to 708.50 - Cont.

7245 - QC Rating ( ) for BF Structure to 708.50 -

### GENERAL CONDITIONS -

8000 - QC Rating ( ) for Submit Performance Payment Bond -

### JUNCTION CHAMBER -

6150 - QC Rating ( ) for Backfill-Junction Chamber -

### MASONRY -

10500 - QC Rating ( ) for Install CMU Perim. Walls -

### MISCELLANEOUS METALS -

7620 - QC Rating ( ) for Install Hatch Cover Suppt. Bea -

### P.S. CONTROL ROOM PLUMBING -

320 - QC Rating ( ) for Delivery-Plumbing pipe & Fitti -

10550 - QC Rating ( ) for Install Plumbing and Fixtures -

### PAINTING -

10590 - QC Rating ( ) for Paint Control Room -

10595 - QC Rating ( ) for Anti Graffiti Coating -

### PAVEMENT AT PUMP STATION -

6941 - QC Rating ( ) for Bitumen Prime Coat -

#### QA COMMENTS -

QA # 0002

started work without preparatory

Outstanding

6942 - QC Rating ( ) for Bitumen Agg Base -

6950 - QC Rating ( ) for Asphalt concrete surface cours -

Phase 2B - Dodge Park Pump Station  
CONTRACT NO. DACW69-96-C-0026  
Columbus, OH

31 Mar 98

**FINAL FOLLOW-UP**

QC RATING: O-OUTSTANDING A-ABOVE AVERAGE S-SATISFACTORY M-MARGINAL U-UNSATISFACTORY N-NOT APPLICABLE

**PAVEMENT MARKING -**

10110 - QC Rating ( ) for Replace Markings on Streets -

**PAVEMENT RESTORATION OVER SEWE -**

P09-05 - QC Rating ( ) for Replace asphalt with concrete -

P09-06 - QC Rating ( ) for Additional Asphalt on side str -

**PUMPS, SEWAGE & SLUDGE -**

7430 - QC Rating ( ) for Install Sump and Piping -

**RELOCATION OF UTILITIES -**

5080 - QC Rating ( ) for Power Relocation On Skidmore -

**RESTEEL -**

10 - QC Rating ( ) for Submittal-Rebar -

7100 - QC Rating ( ) for Place Rebar @ SOG @ 685' -

7120 - QC Rating ( ) for Form and Rebar Walls (N/E) @ 6 -

7130 - QC Rating ( ) for Form and Rebar Walls (S/W) @ 6 -

7160 - QC Rating ( ) for Form and Rebar SOG @691.12' to -

7200 - QC Rating ( ) for Form and Rebar Walls 1,2,3/A 1 -

7230 - QC Rating ( ) for Form and Rebar Walls 3B to C 1 -

7232 - QC Rating ( ) for F and R Ext.Walls B-C Betw.1 -

7250 - QC Rating ( ) for Form and Rebar FSI 685' to 689 -

7270 - QC Rating ( ) for Form and Rebar Baffles -

7290 - QC Rating ( ) for Form and Rebar Landings 704.50 -

7310 - QC Rating ( ) for Form and Rebar Catwalk 708.50 -

7330 - QC Rating ( ) for Form and Rebar Walls 708.50 to -

7370 - QC Rating ( ) for Form and Rebar Catwalk Curb @ -

**ROOF INSULATION -**

10530 - QC Rating ( ) for Install Roof system -

RANGE : ALL

SORT : ACTIVITY

## FINAL FOLLOW-UP

QC RATING: O-OUTSTANDING A-ABOVE AVERAGE S-SATISFACTORY M-MARGINAL U-UNSATISFACTORY N-NOT APPLICABLE

### SAN DIV MH -

5500 - QC Rating ( ) for BF Structure San.Div.MH -

### SANITARY SEWERS -

5230 - QC Rating ( ) for Exc., Lay and Backfill 24" San -

5280 - QC Rating ( ) for Exc., Lay and Backfill 24" San -

5310 - QC Rating ( ) for Exc., Lay and Backfill 24" San -

5340 - QC Rating ( ) for Excavate/Lay/BF 24" San 23 to -

5370 - QC Rating ( ) for Excavate/Lay/BF 24" San 24 to -

5510 - QC Rating ( ) for Excavate/Lay/BF 8" San 20 to 21 -

5540 - QC Rating ( ) for Excavate/Lay/BF 8" San 21 to 22 -

6170 - QC Rating ( ) for Exc., Lay, BF 8" San. Sewer 30 t -

6200 - QC Rating ( ) for Exc., Lay, BF 8" San. Sewer 29 t -

6910 - QC Rating ( ) for Exc., Lay and Backfill 6" San. t -

### SEWER MH'S -

5250 - QC Rating ( ) for Install MH Type "C" @ 27 & BF -

5290 - QC Rating ( ) for Install MH Type "C" @ 20 and B -

5320 - QC Rating ( ) for Install MH Type "C" @ 23 -

5350 - QC Rating ( ) for Install Type "C" MH @ 24 -

5520 - QC Rating ( ) for Install Type "C" MH @ 21 -

5550 - QC Rating ( ) for Install Type "C" MH @ 22 -

6165 - QC Rating ( ) for Install Type "C" MH @ 30 -

6180 - QC Rating ( ) for Install Type "C" MH @ 29 -

6210 - QC Rating ( ) for Install MH @ 28, Test 29 to 28 -

### SLUICE GATE AND FLAP VALVES -

7450 - QC Rating ( ) for Install 96" x 72" Gate -

7460 - QC Rating ( ) for Install 72" x 72" Gate -

7510 - QC Rating ( ) for Install 36" Flap Gates -

**FINAL FOLLOW-UP**

QC RATING: O-OUTSTANDING A-ABOVE AVERAGE S-SATISFACTORY M-MARGINAL U-UNSATISFACTORY N-NOT APPLICABLE

**SPEC SAN MH -**

5220 - QC Rating ( ) for BF Structure -

**SPEC STRM MH#2 -**

5730 - QC Rating ( ) for Set MH Risers -

**STORM MH 1A -**

5870 - QC Rating ( ) for Backfill-MH #1A -

**STORM MH#1 -**

5980 - QC Rating ( ) for Backfill-MH #1 -

**STORM MH'S -**

5750 - QC Rating ( ) for Install Type "F" Strm MH -

6030 - QC Rating ( ) for Install Storm MH Type "F" @ 5 -

6240 - QC Rating ( ) for Install Type "E" MH @ 6A -

6280 - QC Rating ( ) for Install Type "E" MII @ 6B -

6380 - QC Rating ( ) for Install Type "D" MH @ 8 -

6430 - QC Rating ( ) for Install Type "D" MH @ 9 -

**STORM PIPE -**

5740 - QC Rating ( ) for EXCAVATE/LAY/BF 72" RCP 1 TO 2 -

5770 - QC Rating ( ) for Exc., Lay, BF 72" Strm 2 to 3 -

6000 - QC Rating ( ) for Exc., Lay Conc. Encase, BF 15' St -

6010 - QC Rating ( ) for Exc., Lay Conc. Encase, BF 18' St -

6020 - QC Rating ( ) for Exc., Rem. Aban. Util. - Lay, BF 72" -

6050 - QC Rating ( ) for Exc. Rem. Aban. Util. - Lay, BF 72" -

6220 - QC Rating ( ) for Exc., Lay, BF 54" Storm 6 to 6A -

6230 - QC Rating ( ) for Exc., Lay, Conc. Encase 18" Later -

6250 - QC Rating ( ) for Exc., Lay, Conc. Encase 21" Later -

6270 - QC Rating ( ) for Exc., Lay, BF 54" RCP Strm 6A t -

## FINAL FOLLOW-UP

QC RATING: O-OUTSTANDING A-ABOVE AVERAGE S-SATISFACTORY M-MARGINAL U-UNSATISFACTORY N-NOT APPLICABLE

### STORM PIPE - Cont.

- 6290 - Exc., Lay, Conc. Enc., BF 21" Lat - Cont.
- 6290 - QC Rating ( ) for Exc., Lay, Conc. Enc., BF 21" Lat -
- 6310 - QC Rating ( ) for Exc., Lay, BF 54" RCP Strm 6B t -
- 6320 - QC Rating ( ) for Exc., Lay, BF 21" Laterals "C" & -
- 6330 - QC Rating ( ) for Install Type "E" MH @ 7 -
- 6350 - QC Rating ( ) for Exc., Lay, Conc. Enc., BF 18" Late -
- 6360 - QC Rating ( ) for Exc., Lay, Conc. Enc., BF 12" Late -
- 6370 - QC Rating ( ) for Exc., Lay, BF 36" RCP Strm "6" -
- 6390 - QC Rating ( ) for Exc., Lay, Conc. Enc., BF 18" Lat -
- 6400 - QC Rating ( ) for Exc., Lay, Conc. Enc., BF 18" Lat -
- 6420 - QC Rating ( ) for Exc., Lay, BF 36" RCP 8 to 9 -
- 6440 - QC Rating ( ) for Exc., Lay, Conc. Enc., BF 18" & 1 -
- 6441 - QC Rating ( ) for Exc./Lay/Conc Encls/BF/12" @ N -
- 6450 - QC Rating ( ) for Exc., Lay, Conc. Enc., BF 12" Late -
- 6455 - QC Rating ( ) for Exc., Lay, Encase, BF 12" Late -

### STRUCTURAL CONCRETE FORMWORK -

- 6670 - QC Rating ( ) for Form and Pour Transformer Pad -
- 6800 - QC Rating ( ) for Pour 4" Conc. MCC Pad -
- 7110 - QC Rating ( ) for Pour SOG @ 685' -
- 7140 - QC Rating ( ) for Pour Walls @ 691.12' to 695.80 -
- 7170 - QC Rating ( ) for Pour SOG @ 695.20 -
- 7210 - QC Rating ( ) for Pour Walls 1,2,3/A to B to 708 -
- 7240 - QC Rating ( ) for Pour Walls 3B to C to 708.50 -
- 7260 - QC Rating ( ) for Pour FSI 685' to 689.60' -
- 7280 - QC Rating ( ) for Pour Baffles -
- 7300 - QC Rating ( ) for Pour Landings 704.50' -
- 7320 - QC Rating ( ) for Pour Catwalk 708.50 -
- 7340 - QC Rating ( ) for Pour Walls 708.50 to 723-723.5 -
- 7360 - QC Rating ( ) for Pour Landing 709.50 -

**FINAL FOLLOW-UP**

QC RATING: O-OUTSTANDING A-ABOVE AVERAGE S-SATISFACTORY M-MARGINAL U-UNSATISFACTORY N-NOT APPLICABLE

**STRUCTURAL CONCRETE FORMWORK - Cont.**

7380 - Pour Catwalk Curb @ 709.50 - Cont.

7380 - QC Rating ( ) for Pour Catwalk Curb @ 709.50 -

7400 - QC Rating ( ) for Pour Deck @ 725 -

10495 - QC Rating ( ) for Pour Strip Fig for Masonry -

10510 - QC Rating ( ) for Form and Pour Roof Deck -

**INSPECTION CHECKS -**

1. Are all laboratory test results acceptable?
2. Are all test results within the specified limits, and have the test reports been provided as specified?
3. Has straight edge testing been performed by QC? Is the surface plane within the specified tolerances?
4. Is the finished surface appearance acceptable?
5. Are all exposed surfaces finished as specified?

IN COMPLIANCE  
Yes/ No/ NA

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**TEMP. CONST. FACILITIES -**

5060 - QC Rating ( ) for Install Job Signs -

8040 - QC Rating ( ) for Install 6" Wood Barrier STW0 5 -

**TOILET ACCESSORIES -**

10580 - QC Rating ( ) for Install Toilet Specialties -

**TURF -**

10610 - QC Rating ( ) for Replace Turf -

**UNDERGROUND ELECTRICAL SYSTEM -**

6610 - QC Rating ( ) for Install New Primary DB Pole to -

**VERTICAL PUMPS -**

7520 - QC Rating ( ) for Install Lift Pumps -

RANGE : ALL

SORT : ACTIVITY



Phase 2B - Dodge Park Pump Station  
CONTRACT NO. DACW69-96-C-0026  
Columbus, OH

31 Mar 98

**FINAL FOLLOW-UP**

QC RATING: O-OUTSTANDING A-ABOVE AVERAGE S-SATISFACTORY M-MARGINAL U-UNSATISFACTORY N-NOT APPLICABLE

**WATERLINES -**

5570 - QC Rating ( ) for Excavate/Lay/BF 6" H2O From Ri -

5571 - QC Rating ( ) for 6" Fire Hydrant -

5572 - QC Rating ( ) for 6" Fire Hydrant Valve -

5590 - QC Rating ( ) for 6X6 TAPPING SLEEVE AND VALVE -

5591 - QC Rating ( ) for 6x36 Tapping Sleeve and Valve -

5605 - QC Rating ( ) for Run out long laterals -

10130 - QC Rating ( ) for Excavate, Lay, BF 1 1/2" H2O Met -

10131 - QC Rating ( ) for Curb Stop -

10132 - QC Rating ( ) for 1" Meter Box -

RANGE : ALL

SORT : ACTIVITY